

# ARICOR

## Water Solutions

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October 29, 2010

Docket Control  
Arizona Corporation Commission  
1200 West Washington Street  
Phoenix, AZ 85007

Arizona Corporation Commission  
**DOCKETED**

OCT 29 2010

Re: White Horse Ranch Owners Association Inc.  
Docket No. W-04161A-09-0471  
Compliance Issues



Dear Sir/Madam:

Decision No. 71712 requires White Horse Ranch Owners Association (WHROA) to investigate potential additional sources of water, including drilling a new well, interconnecting with a nearby water provider, or merging with another water provider and file a report on its findings regarding a solution to its water supply deficiencies, as a compliance item in this Docket, for Commission Staff review no later than November 1, 2010.

WHROA has completed its investigation and files the attached memorandum reporting its findings in compliance with Decision No. 71712.

Sincerely,

Ray L. Jones  
Consultant to White Horse Ranch Owners Association Inc.

ARIZONA CORPORATION COMMISSION  
DOCKET CONTROL

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**Original** and 13 copies **filed**  
on October 29, 2010 with:

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Copy of the foregoing hand delivered on  
October 29, 2010, to:

Compliance Section  
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# Memorandum

## **ARICOR** Water Solutions

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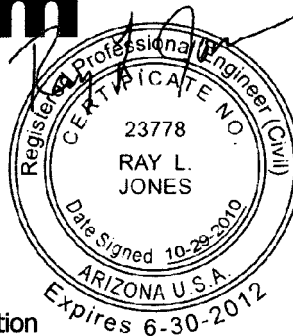
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To: Docket Control  
Arizona Corporation Commission

From: Ray L. Jones

Date: October 29, 2010

Re: Compliance Decision No. 71712  
White Horse Ranch Owners Association  
Investigation of Potential Additional Sources of Water



### Introduction

On September 30, 2009, White Horse Ranch Owners Association, Inc. ("WHROA" or "Company") filed with the Arizona Corporation Commission ("Commission") an application for an increase in its permanent rates and charges ("Application"). Prior to filing the Application, WHROA had experienced diminished production in its wells No. 1 and No. 2 and was forced to haul water to meet the water demands of its customers. In addition WHROA had drilled two new wells, Wells 3 and 4 to address the problem of diminished well production. During the processing of the Application, Wells 3 and 4 were tested and placed into service and found to have a combined capacity of approximately 5 GPM, well below the projected capacity of the wells. WHROA and Commission Staff's were both concerned that WHROA would have to continue haul water in the future.

On June 3, 2010, the Commission issued Decision No 71712 authorizing a rate increase for WHROA. In the decision, the Commission expressed concern "that the Company's wells have been proven inadequate for providing reliable service to the Company's customers and that this deficiency has forced the Company to resort to costly and regular water hauling." In response to those concerns, the Commission included the following ordering paragraphs in Decision No. 71712.

IT IS FURTHER ORDERED that White Horse Ranch Owners Association, Inc. shall investigate potential additional sources of water, including drilling a new well, interconnecting with a nearby water provider, or merging with another water provider.

IT IS FURTHER ORDERED that White Horse Ranch Owners Association, Inc. shall file a report on its findings regarding a solution to its water supply deficiencies, as a compliance item in this Docket, for Commission Staff review no later than November 1, 2010.

This memorandum presents the results of WHROA's investigation of potential additional sources of water and is intended to meet the requirements of Decision No 71712.



## **Background**

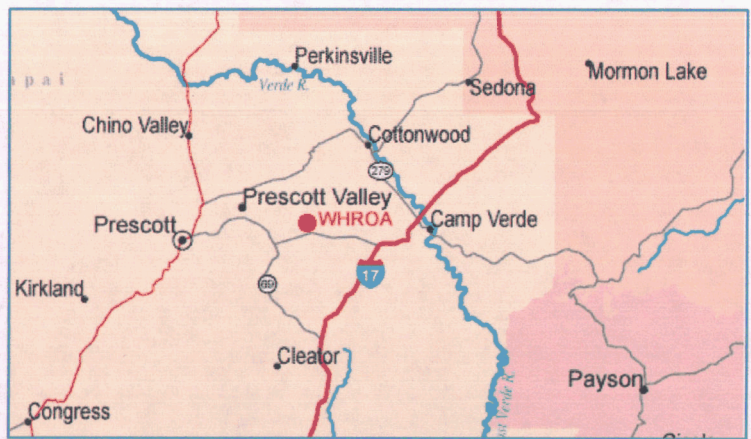
WHROA is a small homeowner association owned water system serving approximately 115 residential customers. The water system is located in Yavapai County approximately five miles east of Dewey on the north side of Highway 169 as shown on Figure 1.

WHROA is located in a relatively isolated area of privately owned land surrounded by National Forest land, Bureau of Land Management land and State land. Within this area of private land, WHROA is the only area with a community water system. All other areas are served by private wells connected to individual or small groups of homes. Figure 2 shows the WHROA CC&N and closely surrounding areas.

WHROA is located in the extreme northern portion of the Agua Fria River watershed and groundwater basin. The Agua Fria groundwater basin consists primarily of sedimentary rock aquifers with a small portion of the basin consisting of basin fill aquifers. The aquifer in the vicinity of WHROA is a sedimentary rock aquifer fed by mountain front recharge and intermittent runoff primarily concentrated in Yarber Wash.

## **Results of Investigation – Well Drilling**

WHROA currently has four wells which pump into a common well transmission line that delivers water to an elevated storage tank located in the northern portion of the service area (See Figure 3). Historically, Well 1 and Well 2 provided the entire water supply for WHROA, with a dependable capacity of 30 and 20 gpm, respectively. In 2008, water production from Wells 1 and 2 began to significantly diminish, falling to



**Figure 1 – Vicinity Map**



**Figure 2 - CC&N Map**



**Figure 3 - Well Locations**



approximately 15 and 7 gpm, respectively. In response to this diminished capacity, WHROA undertook a rehabilitation of Well 2 and began a drilling program, resulting in the drilling of Well 3 and Well 4. The rehabilitation of Well 2 was completed in 2009 and Well 3 and Well 4 were equipped and placed into service in early 2010. Production capacity of Well 2 remained diminished and Well 3 and Well 4 had a combined capacity of only 5 gpm, with nearly all of the capacity coming from Well 4.

During the winter of 2010, the area around WHROA received several significant snowfall and rainfall events, breaking an extended period of drought. In response to this significant precipitation, production in the WHROA wells increased dramatically. Well 1 and Well 2 have returned to their historic capacities of 30 and 20 gpm respectively. Well 4 has increased in capacity to 10 gpm. However, Well 3 has not improved continuing to produce approximately 1 gpm.

WHROA has not hauled water since February 2010 when Well 3 and Well 4 were placed into service. Considering the increased capacity of the wells due to recent precipitation and decreased demand due to the conservation oriented rate structure implemented in June of 2010, WHROA anticipates that well capacity will be adequate for near term future, including the summer of 2011. However, over the mid to long-term, WHROA can expect that periods of dry weather will create the need to expand the available water supply.

The recent increase in well capacity indicates that the diminished capacity in the WHROA wells was likely the result of the extended period of drought and not the result of a permanent reduction in aquifer capacity. Accordingly, it is anticipated that WHROA can successfully drill additional wells in the vicinity of Yarber Wash to increase its available water supply. It is recommended that WHROA retain a qualified hydrogeologist to determine the best location for a new well, focusing on the portion of Yarber Wash between highway 169 and Well 4. Once suitable sites have been identified, WHROA will need to acquire suitable easements from existing property owners for the well site and extension of the well transmission line.

#### **Results of Investigation – Interconnecting or Merging with Nearby Water Provider**

The WHROA water system is relatively isolated with the nearest water providers being the Prescott Valley Water District and the Humboldt Water System Inc. Prescott Valley Water District serves the southern portions of the Town of Prescott Valley. Humboldt Water Systems Inc. serves the Town of Dewey-Humboldt. See Figure 4 for the Town limits.

Both of the water providers are located between four and five miles westerly from the WHROA system with both having facilities near the intersection of Highway 69 and Highway 169. Both water providers are located in the Prescott Active Management Area ("AMA").



In order to interconnect with either system, WHROA would need to acquire easements or rights-of-way and construct a pipeline of at least four miles in length. The elevation change is significant, ranging from approximately 4,550 ft at highway 69 to 5,074 ft at the boundary between the Prescott AMA and the Agua Fria groundwater basin to 4,910 ft at entrance to WHROA. This magnitude of elevation change will likely necessitate construction of multiple pump stations and pressure control stations. The cost of the needed facilities is estimated to range from a minimum of \$1,000,000 to over \$2,000,000.

Further complicating any possibility of interconnection or merger, the Prescott Valley Water District and the Humboldt Water System Inc. are both located within the Prescott AMA. Arizona Law prohibits the transportation of groundwater from within an AMA to any groundwater basin located outside of the AMA eliminating any possibility of interconnection or merger of the systems without a change to State Law.

Considering the high estimated cost of interconnecting the WHROA water system with nearby systems and the prohibition of transporting groundwater from the Prescott AMA to the WHROA service area, interconnection or merger with nearby water provider does not appear to be feasible. It is not recommended that WHROA pursue merger or interconnection with nearby water systems.

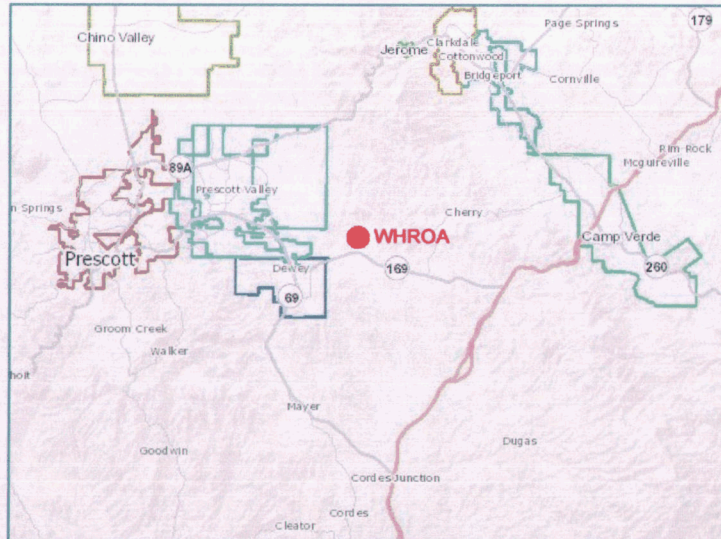


Figure 4 - Nearby Communities



Figure 5 - Groundwater Basin Map